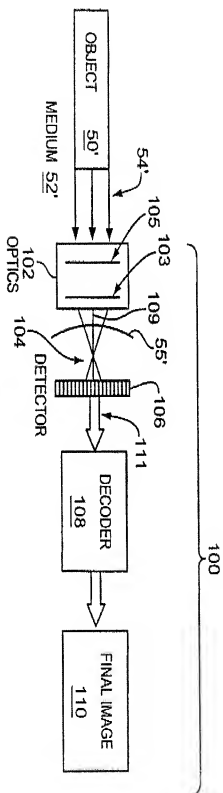


**FIG. 1**  
**PRIOR ART**



**FIG. 2**

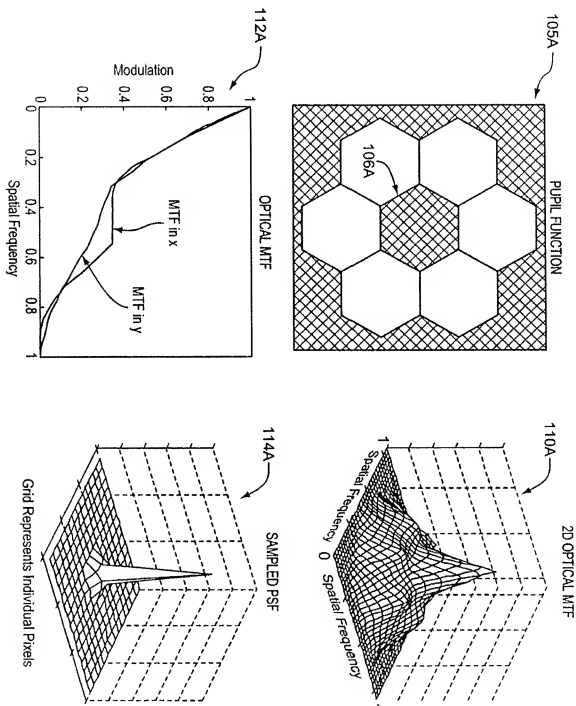


FIG. 3

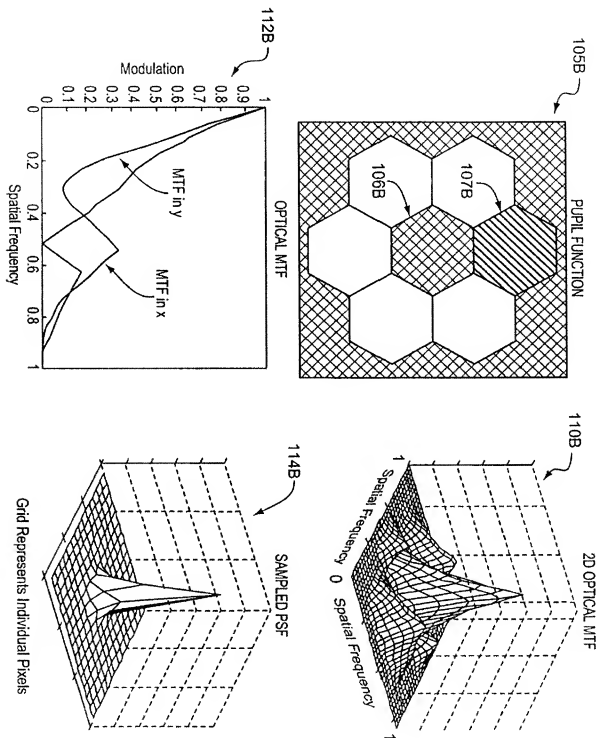


FIG. 4

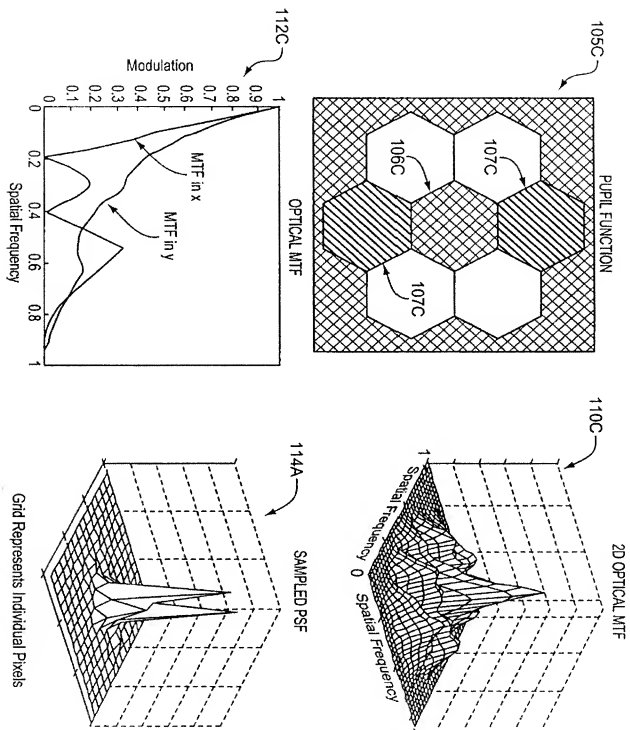


FIG. 5

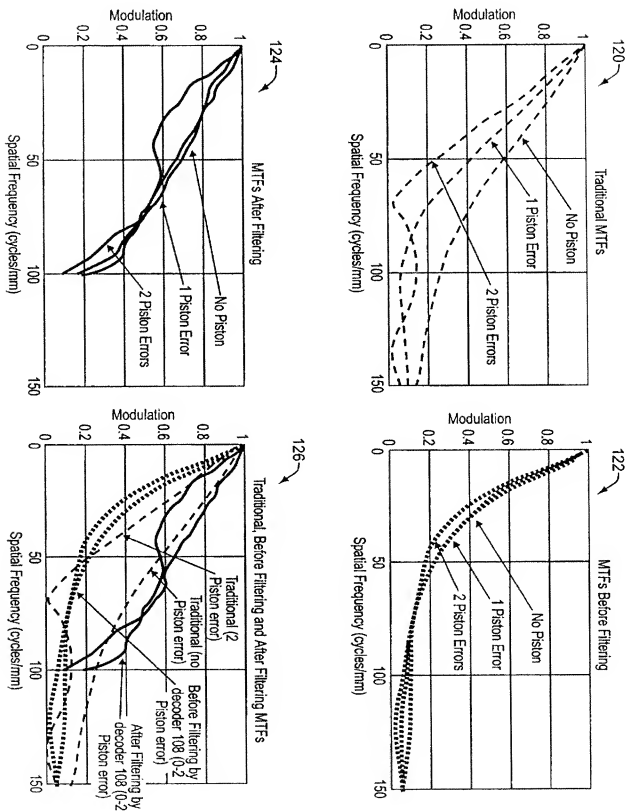
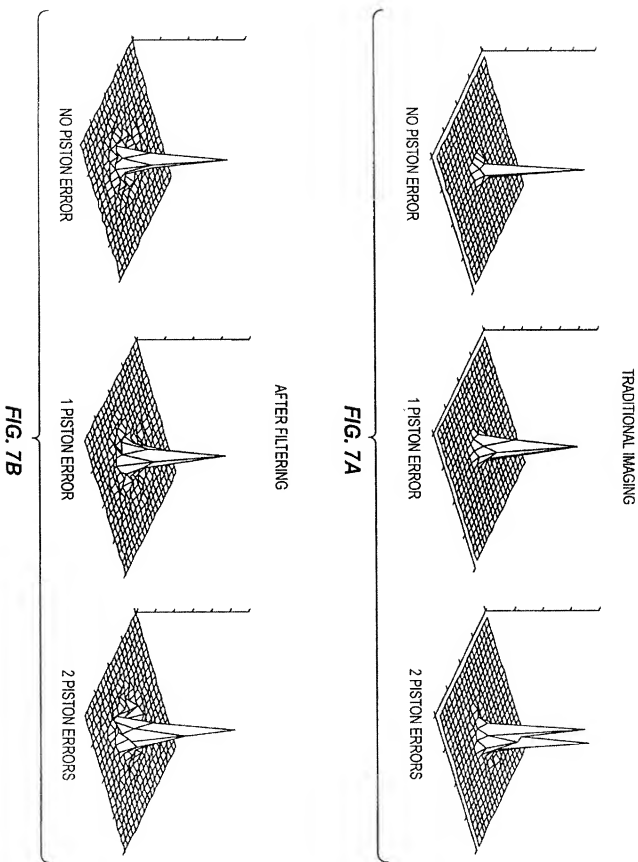


FIG. 6



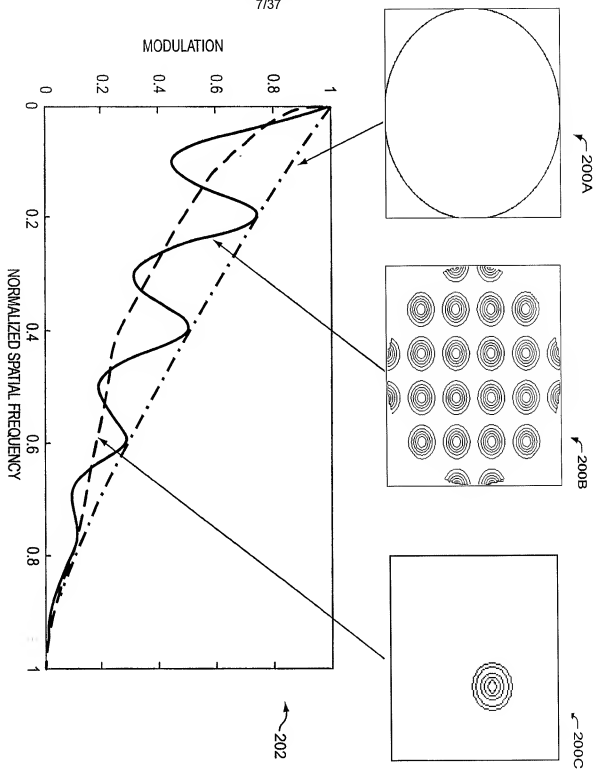


FIG. 8

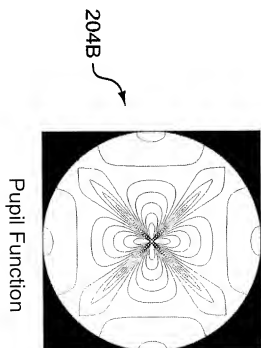
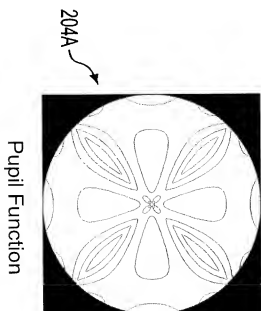
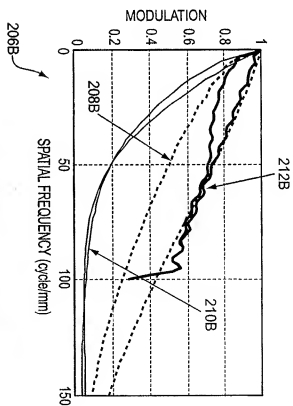
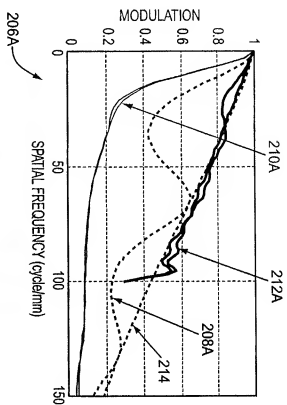
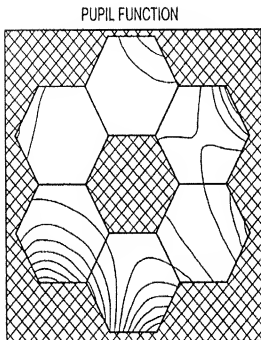


FIG. 9



**FIG. 10****FIRST ORDER OPTICAL PARAMETERS**

2-meter collecting aperture

12-meter focal length

5- $\mu$ m pixel size

100% fill factor

0.5  $\mu$ m wavelength

Phase function is a Zernike polynomial with the following weights

#	Mathematical Form	Weight	#	Mathematical Form	Weight
0	1	0	11	$(4\rho^2 - 3)\rho^2 \cos 2\theta$	0.0379
1	$\rho \cos \theta$	0	12	$(4\rho^2 - 3)\rho^2 \sin 2\theta$	-0.1151
2	$\rho \sin \theta$	0	13	$\rho^4 \cos 4\theta$	0.5730
3	$2\rho^2 - 1$	-0.1914	14	$\rho^4 \sin 4\theta$	0.2412
4	$\rho^2 \cos 2\theta$	-0.3986	15	$(4\rho^4 - 12\rho^2 + 3)\rho \cos \theta$	-0.3050
5	$\rho^2 \sin 2\theta$	0.0290	16	$(4\rho^4 - 12\rho^2 + 3)\rho \sin \theta$	-0.1698
6	$(3\rho^2 - 2)\rho \cos \theta$	0.1073	17	$(5\rho^5 - 4\rho^3)\cos 3\theta$	0.0589
7	$(3\rho^2 - 2)\rho \sin \theta$	-0.0336	18	$(5\rho^5 - 4\rho^3)\sin 3\theta$	-0.0965
8	$\rho^3 \cos 3\theta$	0.0496	19	$\rho^5 \cos 5\theta$	0.7186
9	$\rho^3 \sin 3\theta$	-0.0562	20	$\rho^5 \sin 5\theta$	-0.5219
10	$6\rho^4 - 6\rho^2 + 1$	-0.2093			

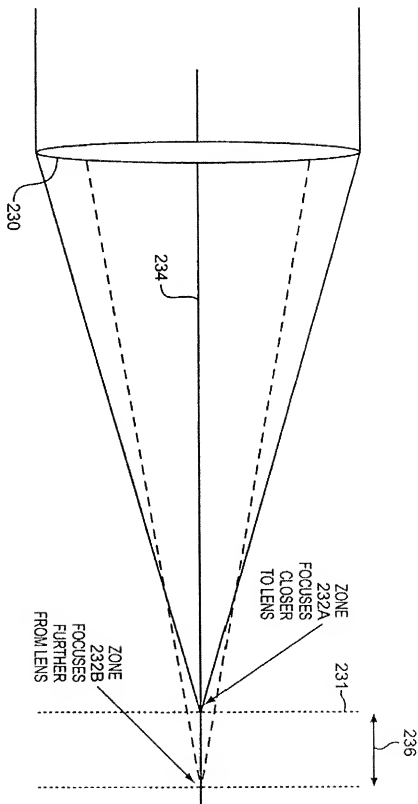


FIG. 11

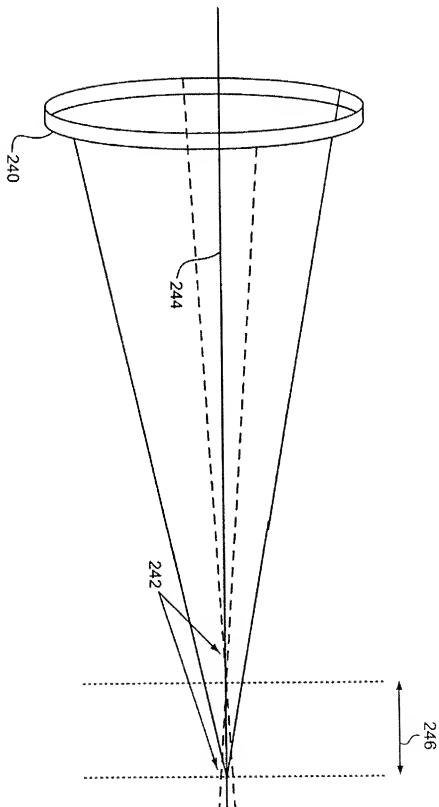


FIG. 12

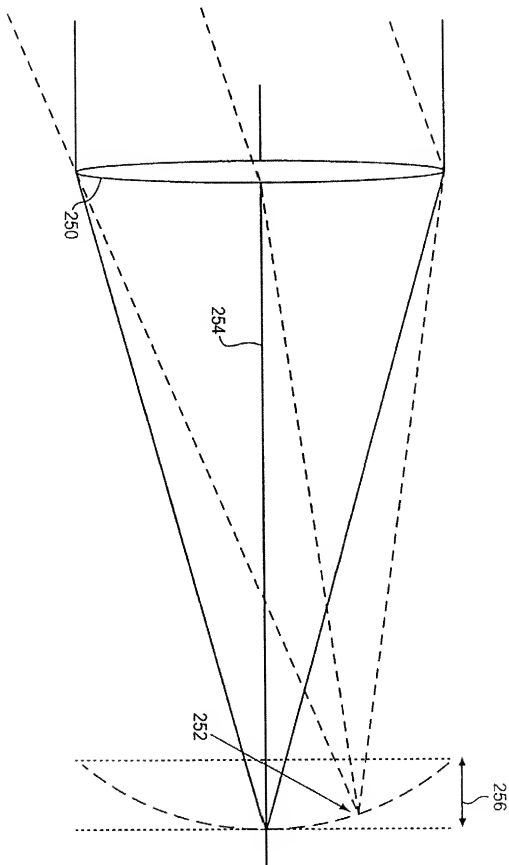


FIG. 13

FIG. 14

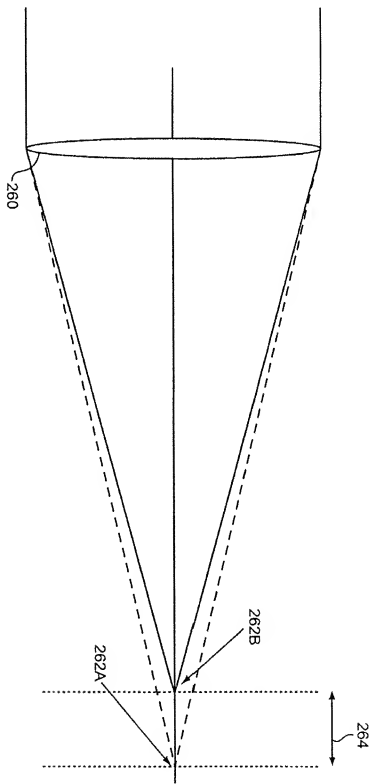
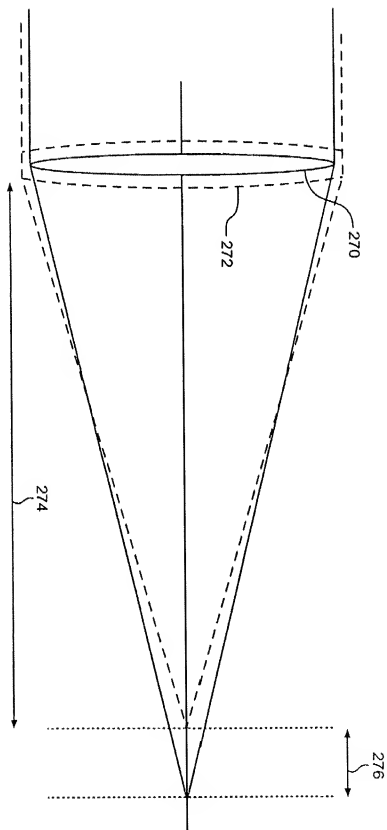


FIG. 15



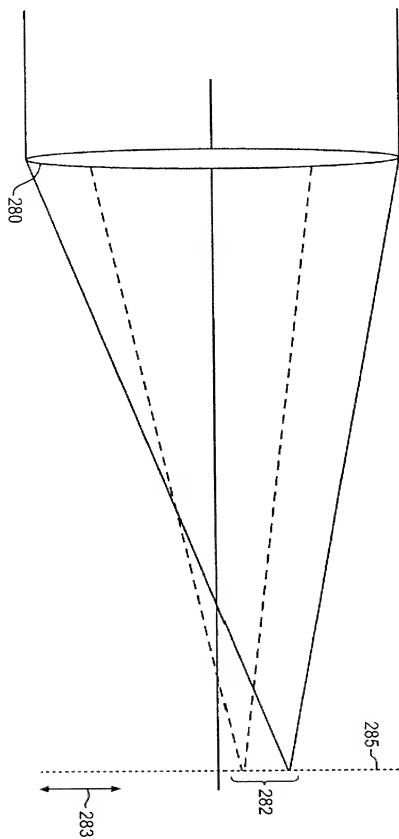
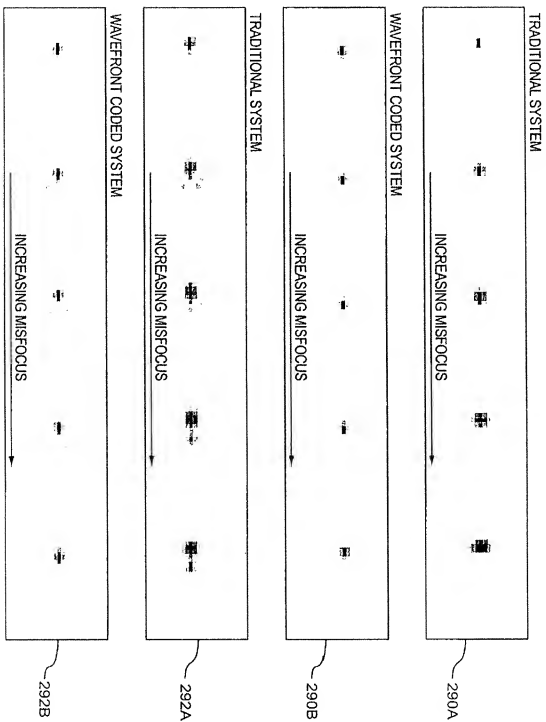


FIG. 16

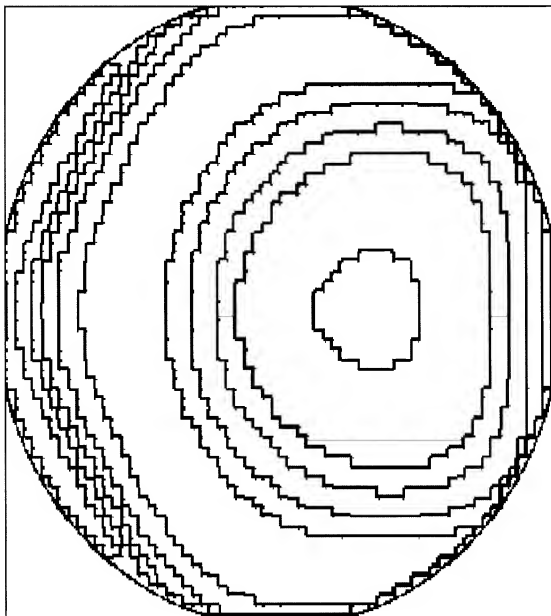
FIG. 17





**FIG. 17A**

EXIT PUPIL OPD IN WAVES



Weights = [-0.1837 -0.3292 0.3110 -0.0210 -0.0628]

Functional Form = [ R R<sup>3</sup> R<sup>5</sup> Rcos(θ) R<sup>3</sup>cos(3θ)]

FIG. 17B

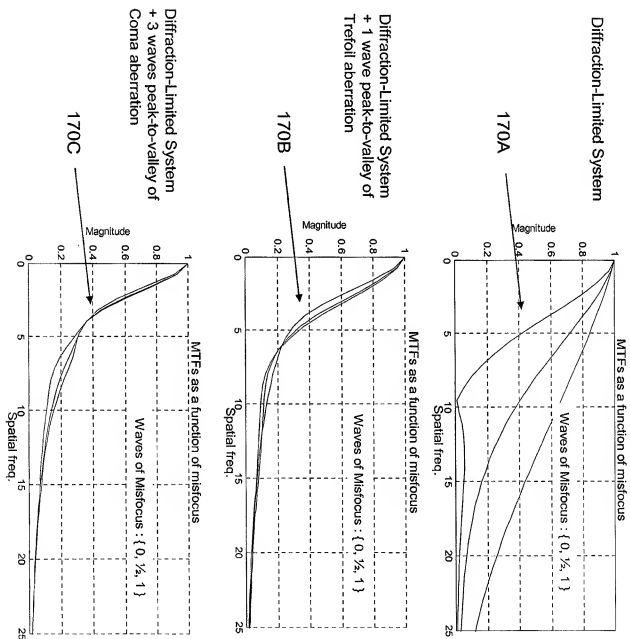


FIG. 17C

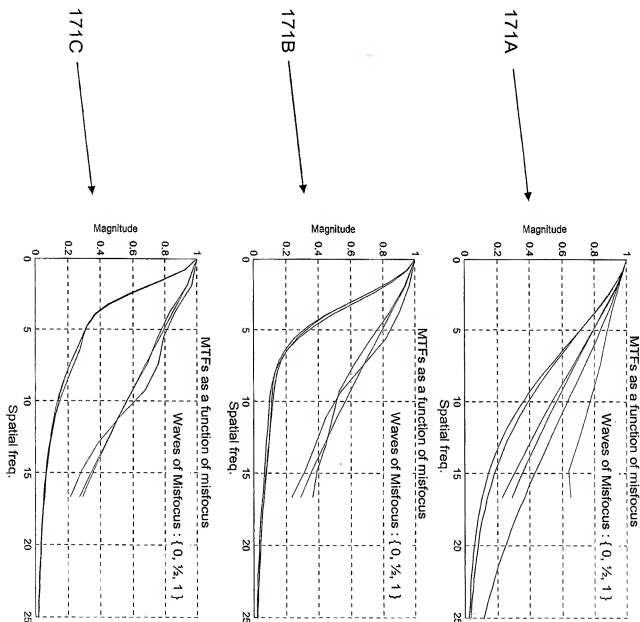
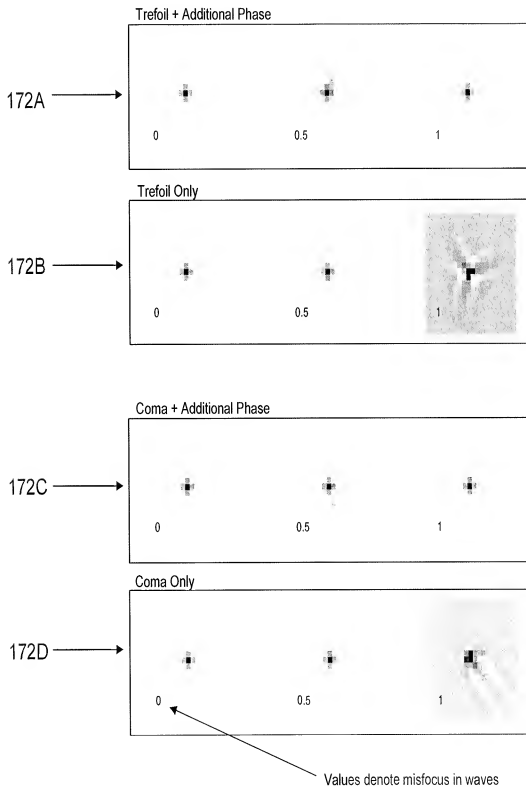


FIG. 17D



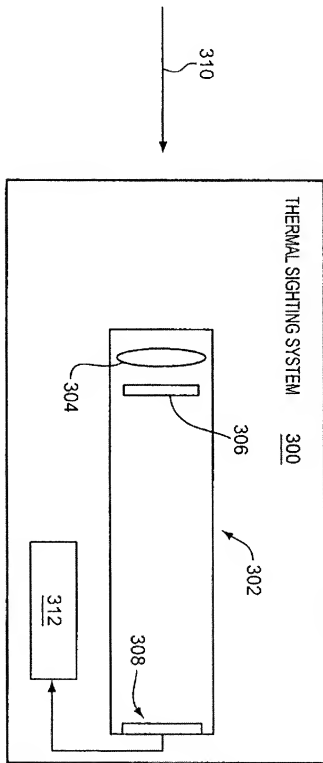


FIG. 18

# Title: METHODS FOR MINIMIZING ABERRATING EFFECTS IN IMAGING SYSTEMS

Inventor: Edward R. Dowski Jr. et al

Attorney Docket No: 420229

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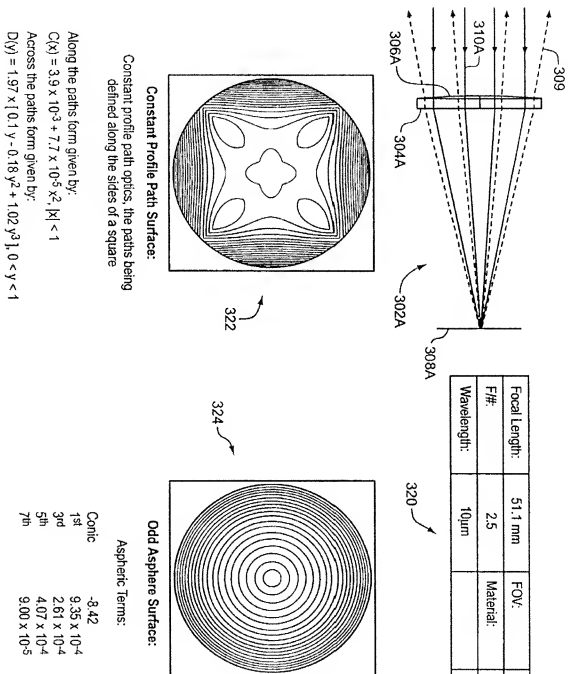


FIG. 19

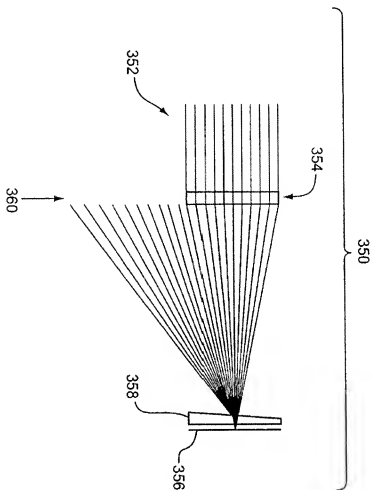


FIG. 20A

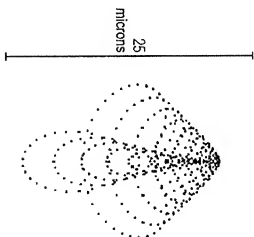


FIG. 20B

FIG. 21A

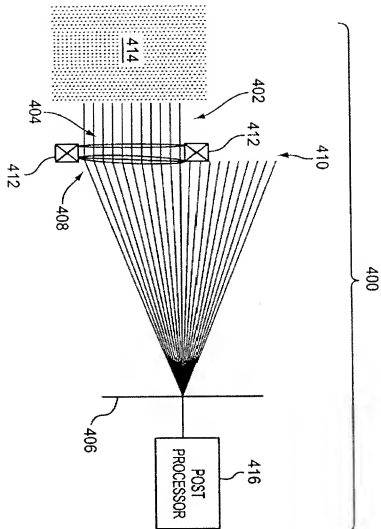
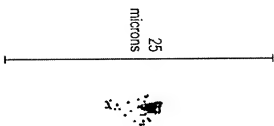


FIG. 21B





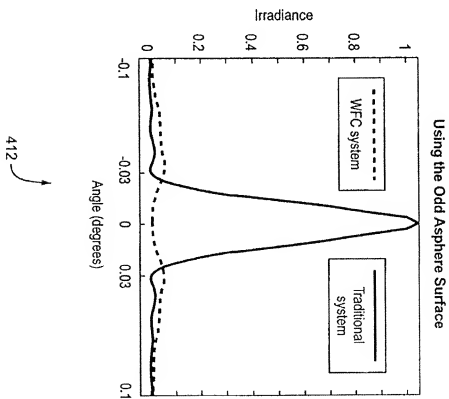
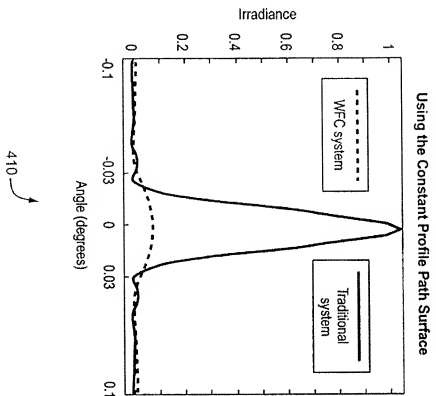


FIG. 22

FIG. 22A

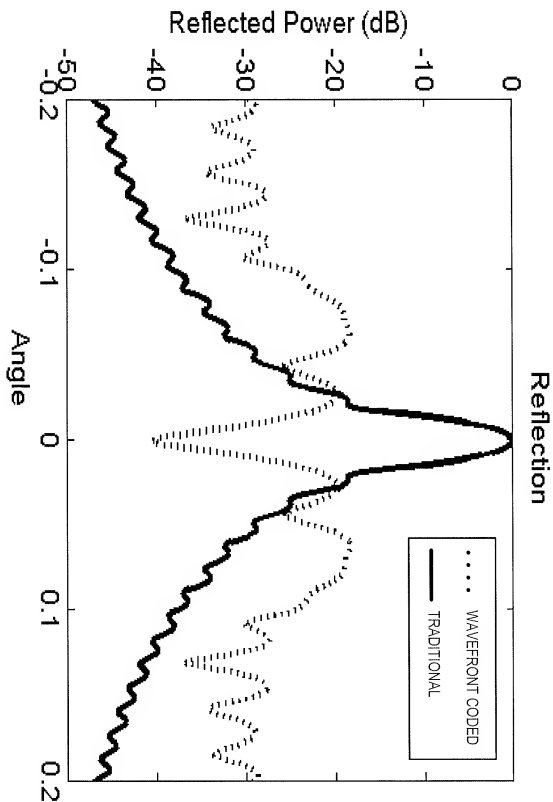


FIG. 22B

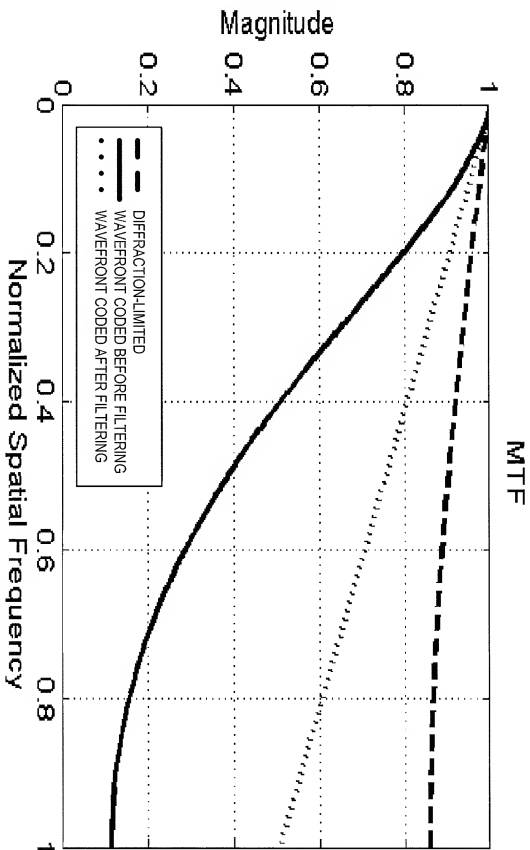


FIG. 22C

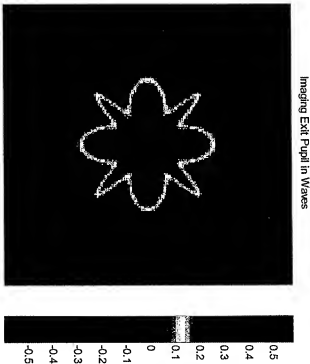
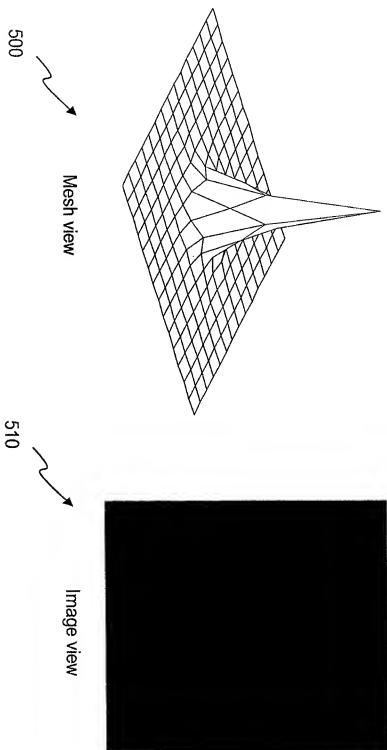


FIG. 22D



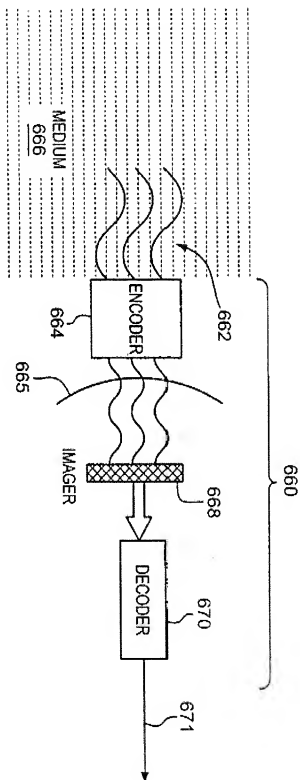


FIG. 23

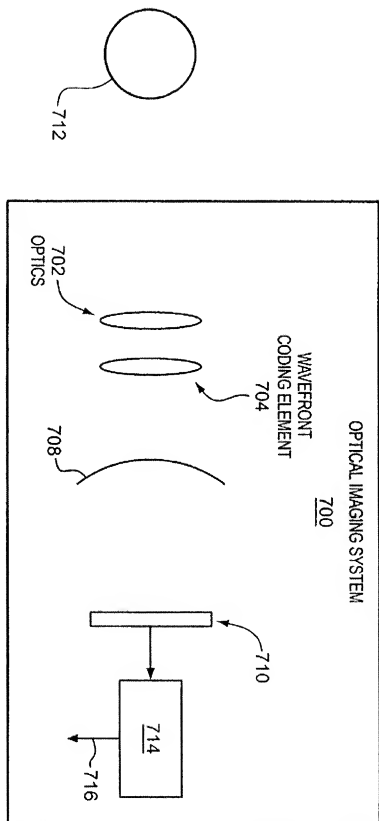


FIG. 24

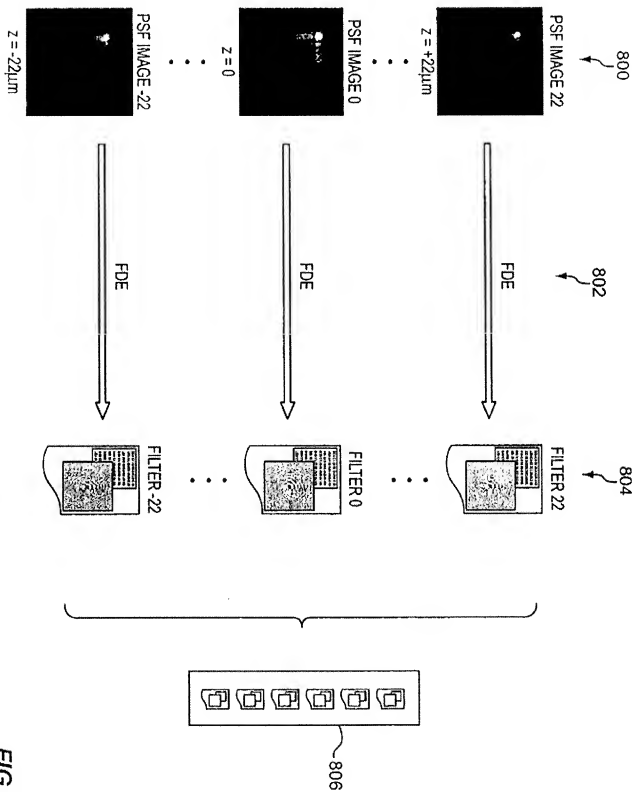


FIG. 25



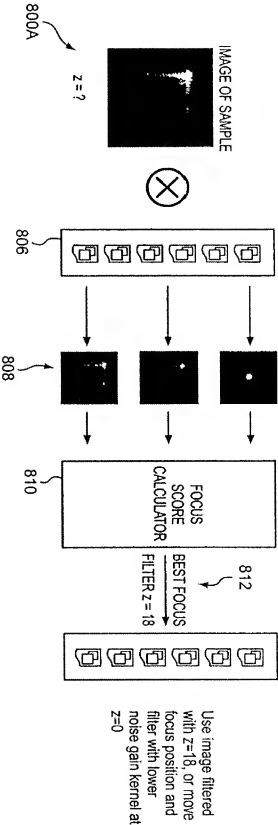


FIG. 26

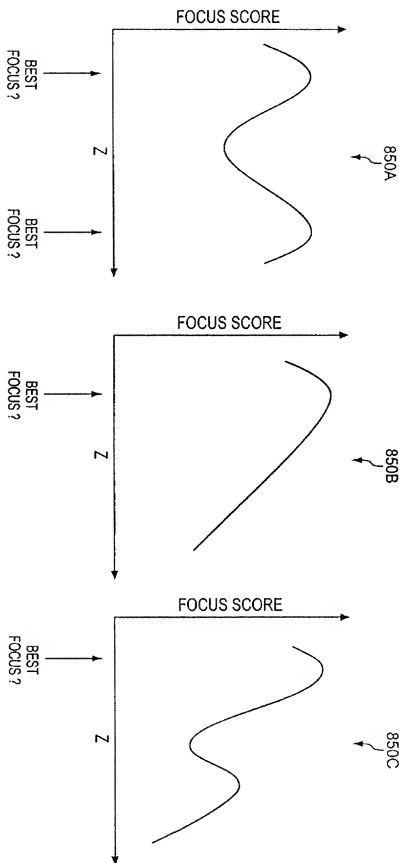
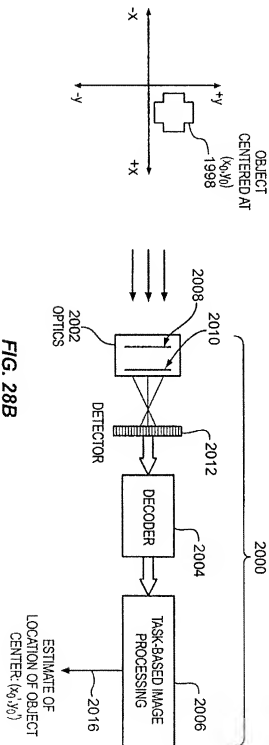
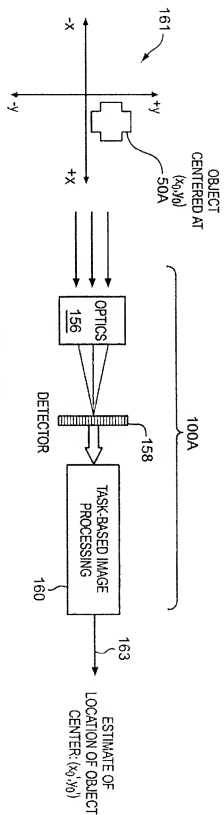


FIG. 27



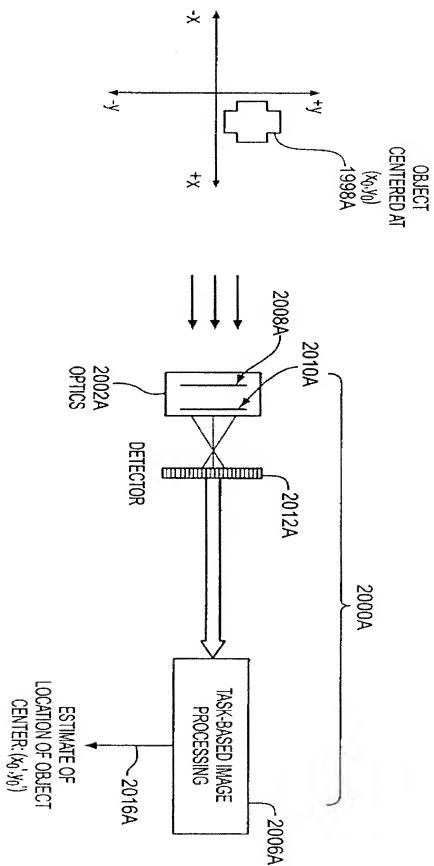
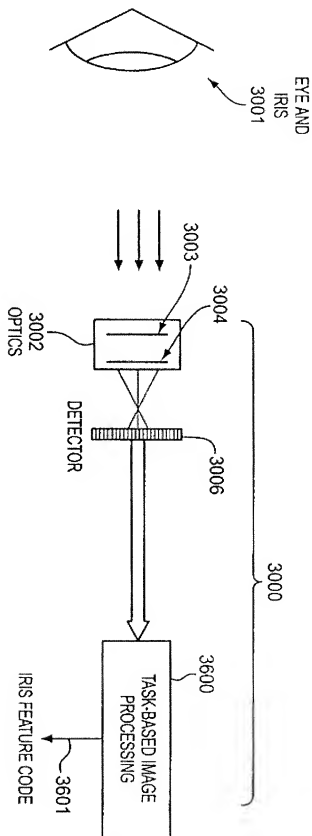


FIG. 28C



**FIG. 29**